

Abstract

An apparatus for cooling an electronic device that includes a fluid heat exchanger, a chiller, and a pump. The fluid heat exchanger transfers heat from a hot portion of the surface of the electronic device to a fluid and has a body through which the fluid may be circulated. The body has a protrusion having a first surface that may be thermally coupled to the hot portion such that the surface of the body is sufficiently distant from the surface of the electronic device that sufficient ambient air may circulate therebetween so as to substantially prevent condensation from forming on the surface of the electronic device and from forming on and dripping from the heat exchanger when the fluid is cooled to at least the dew point of the ambient air and circulated through the body. A heat-conducting path is provided from the first surface to a region of the body that is thermally coupled to the fluid when the fluid is circulated through the body. The chiller circulates the fluid through a chiller and the fluid heat exchanger.